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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,165

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Daisuke Ishizuka

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

TYLER, NATHAN K

ART UNIT

PAPER NUMBER

2625

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/763,165

Applicant(s)

ISHIZUKA, DAISUKE

Examiner

Nathan K. Tyler

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,8,10,12,13,24,30,41,49 and 50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,8,10,12,13,24,30,41,49 and 50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) ✓
Paper No(s)/Mail Date 20071128.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed 26 October 2007, with respect to rejections under 35 U.S.C. 101 have been fully considered and are persuasive. The rejection of claim 24 has been withdrawn.
2. Applicant's arguments with respect to claims 3, 8, 10, 12, 13, 24, 30, 41, 49, and 50 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 30 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Applicant has amended claim 24 to read "A control program stored on a computer-readable medium..." Therefore, the limitation recited in claim 30, "A computer-readable storage

medium on which a control program according to claim 24 is stored,” fails to further limit claim 24.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 8, 10, 24, 30, 41, 49, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hsieh et al. (US 6236770 B1) and Stein et al. (US 5341225 A).

Regarding **claim 8**, Hsieh discloses a movable image sensing unit that scans at least one document image arranged on a document plate while moving relative to the at least one document image (Fig. 1, document plate 18. As shown in Fig. 3, the scanning module is moved relative to the document(s)); and a controller that controls the relative movement of said image sensing unit such that when plural document images arranged on the document plate are scanned, said controller moves said image sensing unit a particular distance in a direction opposite to a sub-scanning direction after completion of scanning one of the plural document images and before starting scanning a next of the plural document images (See Fig. 3. After one area (document) is scanned, the scanning module is returned to the front end before scanning the next

area (document). Because the scanning module scans front to back, the movement of the scanning module must be reversed. This transition from positive to negative velocity will cause the module to stop, at least briefly, before scanning the next area).

Hsieh does not disclose that the controller moves said image sensing unit in the direction opposite to the sub-scanning direction when a larger distance is needed between the one and next document images to accelerate said image sensing unit to a scanning speed.

Stein teaches a scanning system that repositions the scanning head in a reverse direction far enough that the scanning head has enough distance to accelerate to the steady scanning speed before scanning begins (see Fig. 11. "The carriage moves backwards at scanning speed for the stabilization distance plus the reaction distance IJ, then the carriage decelerates again as shown by line segment MH and waits until it is time to start scanning again. The stabilization distance should be of sufficient length to permit the mechanical disturbances due to acceleration to reach steady state" at column 7, line 36).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the scanning system disclosed by Hsieh so that the controller moves the image sensing unit in the direction opposite to the sub-scanning direction when a larger distance is needed between the one and next document images to accelerate said image sensing unit to a scanning speed as taught by Stein, so that the mechanical disturbances due to acceleration do not negatively impact the scanned image (see above).

Regarding **claim 3**, Hsieh discloses that the controller moves said image sensing unit in a direction opposite to a sub-scanning direction a particular distance after the relative movement is temporarily stopped (Fig. 3, step 48 "move scanning module to front end." See grounds for

rejection for claim 8. After the movement is stopped as the direction of the scanning module is reversed, the scanning module is moved opposite to the sub scanning direction a particular distance to the home position).

Regarding **claim 10**, Hsieh discloses that the particular distance is calculated from at least one of a scanning speed, a scanning resolution, a space between documents in a sub-scanning direction, and a minimum distance needed to accelerate said image sensing unit to the scanning speed (see Fig. 2 and Fig. 4, step 62 "move scanning module to next scanning position." When two documents overlap in the sub-scanning direction, the scanning module is moved a particular distance equal to the amount of overlap between the end of one document and the beginning of the next document (space between documents)).

Regarding **claim 24**, Hsieh discloses a control program stored on a computer-readable medium for controlling an image scanning apparatus (see Fig. 5, numeral 104 "scanning control program") comprising the step of: controlling the relative movement of the image sensing unit such that the image sensing unit is moved a particular distance in a direction opposite to a sub-scanning direction after completion of scanning a first of the document images arranged on the document plate and before scanning a next of the document images (see grounds for rejection for claim 8), wherein the image sensing unit is moved relatively backwardly when a larger distance is needed between the one and next document images to accelerate the image sensing unit to a scanning speed (see grounds for rejection for claim 8).

Regarding **claim 30**, Hsieh discloses a computer-readable storage medium on which a control program according to claim 24 is stored (see grounds for rejection for claim 24).

Regarding **claim 41**, Hsieh discloses a scanning method comprising the steps of: scanning a plurality of document images arranged on a document plate while moving an image sensing unit relative to the plurality of document images; and controlling the relative movement of the image sensing unit such that the image sensing unit is moved a particular distance in a direction opposite to a sub-scanning direction after completion of scanning a first of the plurality of document images arranged on the document plate and before scanning a next of the plurality of document images (see grounds for rejection for claim 8), wherein the image sensing unit is moved relatively backwardly when a larger distance is needed between the one and next document images to accelerate the image sensing unit to a scanning speed (see grounds for rejection for claim 8).

Regarding **claim 49**, the combination of Hsieh and Stein as applied to claim 8 discloses an image scanning apparatus comprising: a movable image sensing unit that scans at least one document image arranged on a document plate while moving relative to the at least one document image; and a controller that controls the relative movement of said image sensing unit such that when plural document images arranged on the document plate are scanned, said controller moves said image sensing unit to a position after completion of scanning one of the plural document images and before starting scanning a next of the plural document images, and then start scanning of the next document (see grounds for rejection for claim 8), wherein the position is calculated in accordance with a coordinate of the leading edge of the next document and a distance needed to accelerate said image sensing unit to a scanning speed of the next document (Hsieh discloses calculating the position based on the leading edge of the next document, see Fig. 2 and Fig. 4, step 62 “move scanning module to next scanning position.”

When two documents overlap in the sub-scanning direction, the scanning module is moved a particular distance equal to the amount of overlap between the end of one document and the beginning of the next document (space between documents). As shown in the grounds for rejection for claim 8, Stein teaches adding a “stabilization distance” when reversing the motion of the scanning head to allow enough distance to accelerate to a steady scanning speed).

Regarding **claim 50**, the combination of Hsieh and Stein as applied to claim 8 discloses that the distance is set when the scanning speed of the next document exceeds a starting range of a motor to drive the relative movement (Stein teaches reversing the scanning head a suitable distance in order to accelerate to the scanning speed required for the document).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hsieh ‘770 and Stein as applied to claim 8 above, and further in view of Hsieh et al. (US 6005688 A).

Regarding **claim 12**, the combination of Hsieh ‘770 and Stein does not disclose that the controller moves said image sensing unit to the home position after each document image is read when an operation mode requires that calibration data be acquired each time a document image is scanned.

Hsieh ‘688 discloses a scanning system in which the image sensing unit of the scanner returns to a home position in order to perform calibration for the next document to be read (Fig. 2A, after scanning a document, the image sensing unit returns to a home position at step 203, performs calibration at step 201, and the scans the next document at step 202).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to return the image sensing unit disclosed by the combination of Hsieh '770 and Stein to a home position to perform calibration as taught by Hsieh '688, as recalibrating in between each scan will provide the most accurate image possible ("a calibration is performed to compensate the photo response non-uniformity of the light source, the charge-coupled device and the lens of the scanner" at column 1, line 30).

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hsieh and Stein as applied to claim 8 above, and further in view of Suzuki et al. (US 5239392 A).

Regarding **claim 13**, the combination of Hsieh and Stein does not disclose that the document images are a plurality of frames of images formed on a photographic film.

Suzuki discloses a fixed document scanner ("A reading apparatus of the invention has first and second reading parts slidable along the document surface." At column 1, line 50) that is capable of scanning images formed on photographic film ("The single reading apparatus of the invention can select... high resolution reading a small-sized light-permeable document, such as a photographic film" at column 1, line 54).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to provide the scanner disclosed by the combination of Hsieh and Stein with the photographic film scanning elements taught by Suzuki, so that an accurate image of the photographic film could be obtained ("it is difficult to accurately position the film, and an accurate image may not be obtained" at column 1, line 30. "A fourth object of the invention is to

provide a reading apparatus which the longitudinal direction of a holder for holding the film, in other words, the film juxtaposing direction, is coincident with the main scanning direction or the sub-scanning direction of a document table” at column 2, line 5).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan K. Tyler whose telephone number is 571-270-1584. The examiner can normally be reached on M-F 7:30am - 5:00pm.

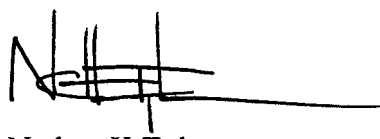
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


KING Y. POON
SUPERVISORY PATENT EXAMINER


Nathan K Tyler
Examiner
Art Unit 2625